Base value and trade value after five years essay sample

Jessica is in the market for a new car. She has narrowed her search down to 2 models. Model A costs $20, 000 and Model B costs $18, 000. With both cars she plans to pay cash and own them for 5 years before trading in for a new car. Her research indicates that the trade in value for Model A after 5 years is 50% of the initial purchase price. The trade in value for Model B is 25%. Jessica has no emotional attachment to either model and wants to make a strictly financial decision. The interest rate is 6%. For simplicity assume that operating and maintenance costs for the models are identical every year. Which model is the better decision and how much " cheaper" is it than the alternative

Model A:

Base Value: 20000

Trade in value after 5 years : 50% = 10000

PV of 10000 = 7472. 58

Model B:

Base Value: 18000

Trade in value after 5 years : 25% = 4500

PV of 4500 = 3362. 66

Also, If invested in Model B, Jessica saves 2000. So, PV of investment in Model B is 3362. 66 + 2000 = 5562. 66 So, Jessica gains 2109. 92 if she invests in Model A

Christine is a new homebuyer. She wants to make sure that she incorporates the cost of maintenance into her decision. She estimates that routine repairs and maintenance on the home she is considering will be $1, 590 in the first year (one year from now). Due to the increasing age of the home, she

expects that maintenance costs will increase 6% annually. The interest rate is 5%. If she plans to be in the home for 10 years, what is the present value of all future maintenance? (Note that maintenance costs will change annually, and starts one year from now and she plans to do the last one before selling her house.) 15000

14413

15809

19771

Year ============ Cost ============= Present Value

1 ============== $ 1590 ============ $ 1590/1. 05

2 ============== $ 1590 * 1. 06 ======== $ 1590 * 1. 06 / (1. 05 * 1. 05) ... ============== ... =============== ...

10 ============= $ 1590 * power 9 of 1. 06 = $ 1590 * power 9 of 1. 06/power 10 of 1. 05

Note that

$ 1590/1. 05 = $ 1514. 2857

1. 06/1. 05 = 1. 0095238

Adding all terms in the right column, we get the present value of all future maintenance:

$ 1514. 2857 (power 10 of 1. 0095238 – 1) / (1. 0095238 – 1) = $ 15809

1590 is year 1. You need to multiply that by 1. 06 to find year 2, and then multiply the answer for that to find year 3 and so on until you get 10 years.

Just put it on a spreadsheet should be easy. After you have found each one,

then you need to find the PV for each year and add them all up. A bit tedious

but simple

i= 5%

n= 10

g= 6%

x= 1590

pv=?

pv = 1590/1. 05 + 1590(1. 06)/1. 05^2 +1590(1. 06)^2/1. 05^3...1590(1.

06)^9/1. 05^10